

field in the space in which said electrical conductor is rotatable and operatively connecting said electrical conductor to said prime mover so that rotational movement of said prime mover is transferred to said electrical conductor, thereby generating a voltage gradient within said electrical conductor in response to rotational movement of said electrical conductor through said magnetic field.

REMARKS

1. Status of the Claims

In the Office Action, claims 1, 4-7, 19, 21 and 22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Dowsett et al (US 3,443,134 and Adachi (JP 4-161056). Claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over Dowsett et al and Adachi, in further view of Nikola Tesla (US 1,061,206). Claim 8 was rejected under 35 U.S.C. as being unpatentable over Dowsett et al and Adachi, in further view of Joshi (US 5,482,919). Claims 2, 20, 31 and 32 were objected to, but were deemed to be allowable if rewritten in independent form. The allowance of claims 9-18 is noted with appreciation.

2.Claim Rejections - Obviousness

Claim 1 has now been amended to include all the features of claim 2, and claim 19 has been amended to include all the features of claim 20. Claims 31 and 32 have been rewritten in independent form. Accordingly, since claims 2, 20, 30 and 31 were deemed allowable if rewritten in independent form, claims 1, 19, 31 and 32 should now be allowable.

Claims 3-8 all depend from claim 1 and should be allowable therewith.

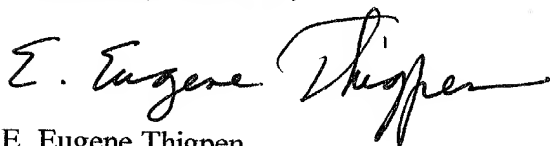
Claims 21 and 22 have been amended to more clearly define the invention, and should now be allowable for the reasons stated below.

container of cryogenic fluid, said flow of gas resulting from evaporation of cryogenic fluid in said container, to said prime mover to induce rotational motion in said prime mover ”.

In all embodiments of the Adachi disclosure, the gas for rotating the turbine comes from the evaporator. In applicant's invention, in contrast, the gaseous flow for rotating the prime mover (which may be a turbine) comes from a container of cryogenic fluid. In one embodiment of applicant's invention, the container is the container in which the superconductive coil is enclosed. In another embodiment of applicant's invention, the container is a container other than the container in which the superconductive coil is enclosed.

In view of the foregoing amendments and remarks, reconsideration and allowance of the pending claims is respectfully requested. The invention as defined in the claims is neither anticipated nor obvious in view of the cited referenced, either alone or in combination. A Notice of Allowance is respectfully requested.

Respectfully submitted,



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Appendix A

Application No. 09/872,574 - Marked up version of amended claims

1. (Twice amended) An electrical power generator, comprising:

a coil formed from material which is electrically superconductive at temperatures below a critical temperature;

a container surrounding said coil adapted for holding a cryogenic fluid to maintain said coil at a temperature below said critical temperature;

a prime mover mounted in said power generator so as to be rotatable in response to a gaseous stream;

a conduit for applying a gaseous stream to said prime mover from a source of pressurized gas resulting from evaporation of a cryogenic fluid, said source of pressurized gas being said container surrounding said coil and said gaseous stream comprising gas resulting from evaporation of said cryogenic fluid; and

an electrical conductor rotatably mounted in said power generator and operatively connected to said prime mover so that rotational movement of said prime mover is transferred to said electrical conductor, said electrical conductor being mounted in a position with respect to said coil so that an electrical current flow in said coil will produce a magnetic field in the space in which said electrical conductor is rotatable, thereby generating a voltage gradient within said electrical conductor in response to rotational movement of said electrical conductor through said magnetic field.

19. (Twice amended) A method for constructing an electrical power generator, comprising:

forming a coil from a material which is electrically superconductive at temperatures below a critical temperature;

enclosing said coil in a container adapted for holding a cryogenic fluid to maintain said coil at a temperature below said critical temperature;

mounting a prime mover in said power generator so as to be rotatable in response to a gaseous stream;

connecting a conduit for applying a gaseous stream to said prime mover from a source of pressurized gas resulting from evaporation of a cryogenic fluid, said source of pressurized gas being said container surrounding said coil and said gaseous stream comprising gas resulting from evaporation of said cryogenic fluid; and

rotatably mounting an electrical conductor in said power generator in a position with respect to said coil so that an electrical current flow in said coil will produce a magnetic field in the space in which said electrical conductor is rotatable and operatively connecting said electrical conductor to said prime mover so that rotational movement of said prime mover is transferred to said electrical conductor, thereby generating a voltage gradient within said electrical conductor in response to rotational movement of said electrical conductor through said magnetic field.

21. (Amended) A method for generating electrical power, comprising
generating a magnetic [filed] field by circulating an electrical current in an electrically superconductive coil immersed in a cryogenic fluid;
utilizing a flow of gas from a container of cryogenic fluid resulting from evaporation of [a] said cryogenic fluid to generate rotational movement of a prime mover; and
operatively connecting said prime mover to an electrical conductor to rotate said electrical conductor in said magnetic field, thereby generating electrical power.

22. (Amended) An apparatus for generating electrical power, comprising:
an electrically superconductive coil immersed in a cryogenic fluid, said superconductive coil generating a magnetic field within a region surrounding said superconductive coil when an electrical current circulates in said superconductive coil;
a prime mover;
a conduit which conducts a flow of gas from a container of cryogenic fluid, said flow of gas resulting from evaporation of [a] cryogenic fluid in said container, to said prime mover to induce rotational motion in said prime mover; and

an electrical conductor rotatably mounted within said region, and operatively connected to said prime mover so that rotational movement of said prime mover is transferred to said electrical conductor.

31. (Amended) An electrical power generator, comprising:

a coil formed from material which is electrically superconductive at temperatures below a critical temperature;

a container surrounding said coil adapted for holding a cryogenic fluid to maintain said coil at a temperature below said critical temperature;

a prime mover mounted in said power generator so as to be rotatable in response to a gaseous stream;

a conduit for applying a gaseous stream to said prime mover from a source of pressurized gas resulting from evaporation of a cryogenic fluid [The method of claim 1] wherein said source of pressurized gas is a container for cryogenic fluid other [that] than the container [in which] surrounding said coil [is enclosed]; and

an electrical conductor rotatably mounted in said power generator and operatively connected to said prime mover so that rotational movement of said prime mover is transferred to said electrical conductor, said electrical conductor being mounted in a position with respect to said coil so that an electrical current flow in said coil will produce a magnetic field in the space in which said electrical conductor is rotatable, thereby generating a voltage gradient within said electrical conductor in response to rotational movement of said electrical conductor through said magnetic field.

32. (Amended) A method for constructing an electrical power generator, comprising:

forming a coil from a material which is electrically superconductive at temperatures below a critical temperature;

enclosing said coil in a container adapted for holding a cryogenic fluid to maintain said coil at a temperature below said critical temperature;

mounting a prime mover in said power generator so as to be rotatable in response to a gaseous stream;

connecting a conduit for applying a gaseous stream to said prime mover from a source of pressurized gas resulting from evaporation of a cryogenic fluid [The method of claim 19] wherein said source of pressurized gas is a container for cryogenic fluid other than the container in which said coil is enclosed; and

rotatably mounting an electrical conductor in said power generator in a position with respect to said coil so that an electrical current flow in said coil will produce a magnetic field in the space in which said electrical conductor is rotatable and operatively connecting said electrical conductor to said prime mover so that rotational movement of said prime mover is transferred to said electrical conductor, thereby generating a voltage gradient within said electrical conductor in response to rotational movement of said electrical conductor through said magnetic field.